



Klamath Network Featured Creature

October 2010

Western Black Widow (*Latrodectus hesperus*)

FIELD NOTES:

General Description:

Widow spiders, members of the *Latrodectus* genus, are a frightful venomous bunch. The black widow spider is the most feared, and has lent its name to many a murder mystery and Halloween tale. The species in the western US is *Latrodectus hesperus*. Females are typically identified by their bulbous black bodies and blood red hourglass designs on the abdomen but can exhibit a variety of markings (e.g., a pair of spots) or no markings at all. Females' bodies are about 0.5 in long, and 1.0-1.5 in including the legs. Males are about a quarter the size of females and are usually gray or brown. They too may have a variety of markings, including an hourglass. However, the males' markings are typically yellow or white, not red.

Reproduction and Development:

Black widow spiders, as notorious as they are, do not necessarily display the mate-and-kill behavior they have a tabloid reputation for. Although some *Latrodectus* females do have a tendency to munch their companions after fertilization, many of the species allow the males to escape this sinister fate. Nevertheless, individuals of this species are solitary outside of the occasionally violent and macabre mating season. Hundreds of eggs are laid in a cocoon suspended from the web in the summer and hatch after 3-4 weeks. The spiderlings will then disperse, maturing after 6-9 months and living 1-3 years in the wild.

Habitat:

Widow spiders are found on every continent except Antarctica. The western black widow is found in western North America, from Canada to Mexico and in all western US states in between. They are most common in dark, sheltered areas, such as under a rock or log overhang.

Where to See It in the Klamath Parks:

Black widow spiders probably lurk in all of the Klamath Network parks, so beware!



Black widow range in light yellow.

<http://animals.nationalgeographic.com/animals/invertebrates/black-widow-spider.html>



Female

<http://healthguide.howstuffworks.com/black-widow-spider-picture.htm>



Adult female and male

<http://www.brownrecluse.org/black-widow-spider/male-black-widow-spider.htm>

More Information:

http://animaldiversity.ummz.umich.edu/site/accounts/information/Latrodectus_hesperus.html

<http://hobospider.org/widows.html>

Behavior and Diet:

Black widow spiders create cobwebs in irregular shapes of sticky silken fibers. Quietly waiting for insects to stumble onto its dinner table, the spider will hang motionless upside down near the center of the web. Having poor eyesight, the black widow relies on web vibrations to determine if prey has landed or if danger is near. Once a tasty mosquito, grasshopper, beetle, or caterpillar entangles itself on the black widow's net, the spider quickly pounces on the unfortunate invertebrate, delivering a venomous bite followed by a deft wrapping of silk, immobilizing the prey until the venom has killed it. It then punctures its fangs into the prey again and administers a digestive enzyme into the corpse, liquefying the innards into a spider smoothie.

Poison:

The 31 *Latrodectus* species not only strike fear into the hearts of their prey, but also poison. Females are more toxic than males, as they have larger venom glands. Their venom is reported to be 15 times stronger than a rattlesnake's! The spider produces Latrotoxin, a neurotoxin that interferes with the neurotransmitter responses. This poison is injected into the victim via the spider's fangs, inducing a gruesome response known as Latrodectism in the prey. Once injected, the lymphatic and circulatory systems rapidly spread the venom through the body, depositing the toxin on the nerve endings. This causes neurotransmitters to release quickly and induce rapid painful muscle contractions (tetany). The muscles cramp and are unable to release. For the spider's small prey, death is quick. Depending on the size of other creatures bitten, recovery levels and times vary. Humans generally do not die from a black widow's bite, but the pain may linger for weeks to months. Black widows do not seek out trouble and are not aggressive; most injuries to humans are from defensive bites.